Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) An isomer, enantiomer, diastereoisomer, or tautomer of a compound, represented by formula I:

$$R^{2} \xrightarrow{A} M^{1} M^{2} Z$$

$$R^{3} \qquad (I)$$

wherein

---- represents either a single or a double bond;

B is -N- and **A** is $=CR^{1}$ -; or

B is =C- and A is NR¹;

is selected from the group consisting of: H, (C₁₋₆)alkyl optionally substituted with: halogen, OR¹¹, SR¹¹ or N(R¹²)₂, wherein R¹¹ and each R¹² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-Het, said aryl or Het optionally substituted with R¹⁶⁰;-or both R¹² are covalently bonded together and to the nitrogen to which they are both attached to form a 5, 6 or 7-membered saturated heterocycle;

the group -C(=Y1)-Z is covalently linked to either M2 or M3,

 M^1 is CR^{4a} , M^2 or M^3 , when not linked to $-C(=Y^1)$ -Z, is CR^5 , M^4 is CR^{4b} ,

Y¹ is O or S;

- Z is defined as NR^{N2}-SO₂-R^C or NR^{N3}-SO₂-N(R^{N2})R^{N1}, wherein R^C<u>or</u>, R^{N1}-or any heterocycle formed by R^{N1}-and R^{N2} is optionally substituted with R⁶⁰;
- R² is selected from: halogen or R²¹, wherein R²¹ is aryl or **Het**, said R²¹ is optionally substituted with R¹⁵⁰;
- R³ is selected from (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl, (C₅₋₇)cycloalkenyl, (C₁₋₃)alkyl-(C₅₋₇)cycloalkenyl, (C₆₋₁₀)bicycloalkyl, (C₁₋₃)alkyl-(C₆₋₁₀)bicycloalkyl, (C₆₋₁₀)bicycloalkyl, (C₆₋₁₀)bicycloalkenyl, HCy or (C₁₋₃)alkyl-HCy, wherein HCy is a saturated or unsaturated 4 to 75- or 6-membered heterocyclic group with 1 to 3-2 heteroatoms selected from O and, S- and N; said alkyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, HCy and alkyl-HCy being optionally substituted with from 1 to 4 substituents selected from: a) halogen;
 - b) (C₁₋₆)alkyl optionally substituted with:
 - 1 to 3 substituents selected from halogen;
 - OR^{31} or SR^{31} wherein R^{31} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or
 - N(R³²)₂ wherein each R³² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl; or both R³² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;
 - c) OR^{33} or SR^{33} wherein R^{33} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-3}) alkyl- (C_{3-7}) cycloalkyl;
 - d) $N(R^{35})_2$ wherein each R^{35} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-3}) alkyl- (C_{3-7}) cycloalkyl; or both R^{35} -are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

R^{4a}, R^{4b}, R⁵ each are independently H or defined as R¹⁵⁰;

R⁶⁰ is defined as 1 to 4 substituents independently selected from:

- 1 to 3 substituents selected from halogen;
- one of each substituent selected from: OPO₃H, NO₂, cyano, azido, C(=NH)NH₂,

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 $C(=NH)NH(C_{1-6})$ alkyl or $C(=NH)NHCO(C_{1-6})$ alkyl, SO_3H ; and

- 1 to 3 substituents selected from:
- a) (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₃₋₇) spirocycloalkyl optionally containing 1 or 2 heteroatoms selected from N, O and S; (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, all of which optionally being substituted with R¹⁵⁰;
- b) OR°;
- c) $OC(O)R^{O}$;
- d) SR^{o} , $SO_{2}R^{c}$, $SO_{2}N(R^{N2})R^{N1}$, $SO_{2}N(R^{N2})C(O)R^{c}$, $CONR^{N3}SO_{2}N(R^{N2})R^{N1}$, or $CONR^{N2}SO_{2}R^{c}$;
- e) $N(R^{N2})R^{N1}$, $N(R^{N2})COOR^{C}$, $N(R^{N2})SO_{2}R^{C}$ or $N(R^{N1})OR^{O}$;
- f) N(R^{N2})COR^C;
- g) $N(R^{N3})CON(R^{N2})R^{N1}$;
- h) $N(R^{N3})COCOR^{C}$, $N(R^{N3})COCOOR^{O}$, $N(R^{N3})COCON(R^{N2})OR^{O}$, or $N(R^{N3})COCON(R^{N2})R^{N1}$;
- i) CORo;
- j) COOR°;
- k) $CON(R^{N2})R^{N1}$;
- aryl, Het, (C₁-₄)alkyl-aryl or (C₁-₄)alkyl-Het, all of which optionally being substituted with R¹50;

wherein said R^{N1}, R^c and/or R^o are optionally substituted with R¹⁵⁰ as defined,

R¹⁵⁰ is defined as 1 to 4 substituents independently selected from:

- 1 to 3 substituents selected from halogen;
- one of each substituent selected from: OPO_3H , NO_2 , cyano, azido, SO_3H $C(=NH)NH_2$, $C(=NH)NH(C_{1-6})$ alkyl or $C(=NH)NHCO(C_{1-6})$ alkyl; and
- 1 to 3 substituents selected from:
- a) (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₃₋₇)spirocycloalkyl optionally containing 1 or 2 heteroatoms selected from N₇O and S; (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₃) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with R¹⁶⁰;
- b) OR^o;
- c) OC(O)R^o;
- d) SR^0 , SO_2R^c , $SO_2N(R^{N2})R^{N1}$ or $SO_2N(R^{N2})C(O)R^c$;
- e) $N(R^{N2})R^{N1}$, $N(R^{N2})COOR^{C}$, $N(R^{N2})SO_{2}R^{C}$ or $N(R^{N1})OR^{O}$;
- f) $N(R^{N2})COR^{C}$;
- g) $N(R^{N3})CON(R^{N2})R^{N1}$;
- h) $N(R^{N3})COCOR^{C}$, $N(R^{N3})COCOOR^{O}$, $N(R^{N3})COCON(R^{N2})OH$, $N(R^{N3})COCON(R^{N2})O(C_{1-4})$ alkyl or $N(R^{N3})COCON(R^{N2})R^{N1}$;

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- i) CORO;
- i) COOR^o;
- k) tetrazole, triazole, CONR^{N2}SO₂R^C, CONR^{N3}-SO₂N(R^{N2})R^{N1} or CON(R^{N2})R^{N1}; wherein said R^{N1}, R^C and/or R^O are optionally substituted with R¹⁶⁰ as defined;

R¹⁶⁰ is defined as 1, 2 or 3 substituents independently selected from:

- 1, 2 or 3 fluorine substituents; and
- one of each substituent selected from tetrazole, triazole, chlorine, bromine, iodine, CN, nitro, (C_{1-4}) alkyl, OCF_3 , SCF_3 , CF_3 , $COOR^{161}$, SO_3H , SR^{161} , SO_2R^{163} , OR^{161} , $N(R^{162})_2$, $SO_2N(R^{162})_2$, $SO_2NR^{162}COR^{162}$, $NR^{162}SO_2R^{163}$, $-NR^{161}$ -CO-CO $(NR^{162})_2$, $-CONR^{161}SO_2R^C$, $CONR^{161}$ - $SO_2N(R^{162})_2$ or $-SO_2$ - NR^{161} - COR^C , $NR^{162}COR^{162}$ or $CON(R^{162})_2$, wherein R^{161} , R^{163} and each R^{162} is independently (C_{1-4}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-3}) alkyl- (C_{3-7}) cycloalkyl; and R^{161} and each R^{162} may each independently also be H; or both R^{162} -are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;
- R^{o} , R^{c} are independently defined as (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-4}) alkyl- (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, aryl, Het, (C_{1-4}) alkyl-aryl, or (C_{1-4}) alkyl-Het; or R^{o} is also optionally defined as H.
- R^{N1} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-4}) alkyl- (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, aryl, Het, (C_{1-4}) alkyl-aryl, (C_{1-4}) alkyl-Het; and
- R^{N2}, R^{N3}, R^{N4} are independently H, CH₃, (C₂₋₆)alkyl, (C₃₋₆)cycloalkyl, (C₁₋₄)alkyl-(C₃₋₆)cycloalkyl; all of which being optionally substituted with halogen, carboxy or (C₁₋₆)alkoxycarbonyl; and/or wherein said alkyl, cycloalkyl or alkylcycloalkyl is optionally substituted with hydroxy, (C₁₋₆)alkyl, (C₁₋₆)alkoxy, amino, -NH(C₁₋₄)alkyl and/or -N((C₁₋₄)alkyl)₂;-or

—in the case

a) of a group N(R^{N2})R^{N1} the substituents R^{N2} and R^{N1}; or
b) of a group NR^{N3}-N(R^{N2})R^{N1} the substituents R^{N3} and R^{N1}, or R^{N2} and R^{N1};
may be covalently bonded together to form a 4-, 5-, 6- or 7-membered saturated or
unsaturated N-containing heterocycle or a 8-, 9-, 10- or 11-membered N-containing
heterobicycle, each optionally having additionally from 1 to 3-heteroatoms selected
from O, N, and S;

wherein **Het** is defined as a 4-, 5-<u>or</u>, 6<u>--or 7-membered heterocycle having 1 <u>or 2 to 4</u> heteroatoms selected from O, N and S, or a 8-, 9-, 10- or 11-membered heterobicycle having 1 to 5 heteroatoms selected from O, N and S;</u>

or a salt thereof.

- 2. (Currently amended) The compound according to claim 1, wherein
- ---- represents either a single or a double bond;

B is -N- and A is CR1 or =N-; or

B is =C- and A is O, S or NR¹;

is selected from the group consisting of: H, (C₁₋₆)alkyl optionally substituted with: halogen, OR¹¹, SR¹¹ or N(R¹²)₂, wherein R¹¹ and each R¹² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-Het, said aryl or Het optionally substituted with R¹⁶⁰;-or both R¹²-are covalently bonded together and to the nitrogen to which they are both attached to form a 5, 6 or 7-membered saturated heterocycle;

the group $-C(=Y^1)-Z$ is covalently linked to either M^2 or M^3 ,

 M^1 is CR^{4a} , one of M^2 and M^3 is CR^5 , M^4 is CR^{4b} .

and in addition one or two of the groups selected from M^1 , M^2 , M^3 and M^4 may also be N, with the proviso that the group M^2 or M^3 to which $-C(=Y^1)-Z$ is linked is an C-atom,

Y¹ is O or S:

Z is defined as NR^{N2}-SO₂-R^C, wherein R^C is optionally substituted with R⁶⁰;

 $\mathbf{R^2}$ is selected from: halogen or $\mathbf{R^{21}}$, wherein $\mathbf{R^{21}}$ is aryl or \mathbf{Het} , said $\mathbf{R^{21}}$ is optionally

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substituted with R150:

R³ is selected from (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl, (C₅₋₇)cycloalkenyl, (C₁₋₃)alkyl-(C₅₋₇)cycloalkenyl, (C₆₋₁₀)bicycloalkyl, (C₁₋₃)alkyl-(C₆₋₁₀)bicycloalkyl, (C₆₋₁₀)bicycloalkenyl, (C₆₋₁₀)bicycloalkenyl, HCy or (C₁₋₃)alkyl-HCy, wherein HCy is a saturated or unsaturated 4 to 75- or 6-membered heterocyclic group with 1 to 3-2 heteroatoms selected from O and, S-and N; said alkyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, HCy and alkyl-HCy being optionally substituted with from 1 to 4 substituents selected from: a) halogen;

- b) (C₁₋₆)alkyl optionally substituted with:
 - OR^{31} or SR^{31} wherein R^{31} is H, $(C_{1-6}$ alkyl), (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or
 - N(R³²)₂ wherein each R³² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl; or both R³²-are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;
- c) OR^{33} or SR^{33} wherein R^{33} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-3}) alkyl- (C_{3-7}) cycloalkyl;
- d) $N(R^{35})_2$ wherein each R^{35} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-3}) alkyl- (C_{3-7}) cycloalkyl; or both R^{35} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7 membered saturated heterocycle;

R^{4a}, R^{4b}, R⁵ each are independently H or defined as R¹⁵⁰:

R⁶⁰ is defined as 1 to 4 substituents independently selected from:

- 1 to 3 substituents selected from halogen;
- one of each substituent selected from: OPO $_3$ H, NO $_2$, cyano, azido, C(=NH)NH $_2$, C(=NH)NH(C $_{1-6}$)alkyl or C(=NH)NHCO(C $_{1-6}$)alkyl, SO $_3$ H; and
- 1 to 3 substituents selected from:
- a) (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom selected from N₇-O and S; (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, all of which optionally being substituted with R¹⁵⁰;
- b) OR°;
- c) $OC(O)R^{O}$;
- d) SR^{O} , $SO_{2}R^{C}$, $SO_{2}N(R^{N2})R^{N1}$, $SO_{2}N(R^{N2})C(O)R^{C}$ or $CONR^{N2}SO_{2}R^{C}$;
- e) $N(R^{N2})R^{N1}$, $N(R^{N2})COOR^{C}$ or $N(R^{N2})SO_{2}R^{C}$;

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- f) N(R^{N2})COR^C;
- g) $N(R^{N3})CON(R^{N2})R^{N1}$;
- h) N(RN3)COCORC, N(RN3)COCOORO or N(RN3)COCON(RN2)RN1;
- i) CORO;
- j) COOR°;
- k) $CON(R^{N2})R^{N1}$;
- aryl, Het, (C₁-₄alkyl)aryl or (C₁-₄alkyl)Het, all of which optionally being substituted with R¹⁵₀:

wherein said R^{N1}, R^C and/or R^O are optionally substituted with R¹⁵⁰ as defined,

R¹⁵⁰ is defined as 1 to 4 substituents independently selected from:

- 1 to 3 substituents selected from halogen;
- one of each substituent selected from: OPO $_3$ H, NO $_2$, cyano, azido, C(=NH)NH $_2$, C(=NH)NH(C $_{1-6}$)alkyl or C(=NH)NHCO(C $_{1-6}$)alkyl; and
- 1 to 3 substituents selected from:
- a) (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatoms selected from N, O and S; (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₃) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with R¹⁶⁰;
- b) OR^o;
- c) $OC(O)R^{O}$:
- d) SR^{O} , $SO_{2}R^{C}$, $SO_{2}N(R^{N2})R^{N1}$ or $SO_{2}N(R^{N2})C(O)R^{C}$;
- e) $N(R^{N2})R^{N1}$, $N(R^{N2})COOR^{C}$ or $N(R^{N2})SO_{2}R^{C}$;
- f) $N(R^{N2})COR^{C}$;
- g) $N(R^{N3})CON(R^{N2})R^{N1}$;
- h) N(R^{N3})COCOR^c, N(R^{N3})COCOOR^o or N(R^{N3})COCON(R^{N2})R^{N1}; wherein R^{N1} is as defined or OH, OAlkyl;
- i) CORO;
- i) COORO:
- k) tetrazole or CON(R^{N2})R^{N1};

wherein said R^{N1}, R^C and/or R^O are optionally substituted with R¹⁶⁰ as defined;

R¹⁶⁰ is defined as 1, 2 or 3 substituents independently selected from:

- 1, 2 or 3 fluorine substituents; and
- one of each substituent selected from tetrazole, chlorine, bromine, iodine, CN, nitro, C₁₋₄alkyl, CF₃, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶³, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, SO₂NR¹⁶²COR¹⁶², NR¹⁶²SO₂R¹⁶³, NR¹⁶²COR¹⁶² or CON(R¹⁶²)₂, wherein R¹⁶¹, R¹⁶³ and each R¹⁶² is independently (C₁₋₄)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl;

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and R¹⁶¹ and each R¹⁶² may each independently also be H; or both R¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

- R^{o} , R^{c} are independently defined as (C_{1-6}) alkyl, (C_{3-6}) cycloalkyl, (C_{1-4}) alkyl- (C_{3-6}) cycloalkyl, (C_{1-4}) alkyl-aryl, (C_{1-4}) alkyl-aryl, (C_{1-4}) alkyl-Het;
- R^{N1} is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₄)alkyl-(C₃₋₆)cycloalkyl, (C₂₋₆)alkenyl, aryl, Het, (C₁₋₄)alkyl-aryl, (C₁₋₄)alkyl-Het; or
- R^{N2}, R^{N3}, R^{N4} are independently H, CH₃, (C₂₋₆alkyl), (C₃₋₆)cycloalkyl, (C₁₋₄)alkyl-(C₃₋₆)cycloalkyl; all of which being optionally substituted with halogen, carboxy or C₁₋₆-alkoxycarbonyl; and/or wherein said alkyl, cycloalkyl or alkylcycloalkyl is optionally substituted with hydroxy, C₁₋₆-alkyl, C₁₋₆-alkoxy, amino, -NH(C₁₋₄-alkyl) and/or -N(C₁₋₄-alkyl)₂;-and

in the case

a) of a group N(R^{N2})R^{N1} the substituents R^{N2} and R^{N1}; or
b) of a group NR^{N3}-N(R^{N2})R^{N1} the substituents R^{N3} and R^{N1}, or R^{N2} and R^{N1};
may be covalently bonded together to form a 4-, 5-, 6- or 7-membered saturated or
unsaturated N-containing heterocycle or a 8-, 9-, 10- or 11-membered N-containing
heterobicycle each may have additionally from 1 to 3 heteroatoms selected from O;
N, and S, wherein said heterocycle or heterobicycle is optionally substituted as
defined;

wherein **Het** is defined as a 4-, 5-, or 6-or 7-membered heterocycle having 1 or 2 to 4 heteroatoms selected from O₇ N-and S, or a 8-, 9-, 10- or 11-membered heterobicycle having 1 to 5 heteroatoms selected from O, N and S;

or a salt thereof.

(Previously presented) The compound according to claim 1 selected from formulas1.1 and 1.2

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wherein R¹, R², R³, Y¹, Z, M¹, M², M³ and M⁴ are defined as in claim 1.

- 4. (Original) The compound according to claim 1, wherein \mathbb{R}^1 is selected from the group consisting of: H and (C_{1-6}) alkyl.
- 5. (Original) The compound according to claim 4, wherein R^1 is H, $C\dot{H}_3$, ethyl, or isobutyl.
- 6. (Original) The compound according to claim 5, wherein R¹ is H or CH₃.
- 7. (Original) The compound according to claim 6, wherein R¹ is CH₃.
- 8. (Original) The compound according to claim 1, wherein Y^1 is O.
- 9. (Original Currently amended) The compound according to claim 1, wherein **Z** is NR^{N3}-SO₂-N(R^{N2})R^{N1}, wherein R^{N1}-or-any heterocycle formed by R^{N1} and R^{N2} is optionally substituted with R⁶⁰, and wherein R^{N3}, R^{N2}, R^{N1} and R⁸⁰ are defined as in claim 1.
- 10. (Original) The compound according to claim 1, wherein Z is NR^{N2} -SO₂- R^{C} ,

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wherein R^c is optionally substituted with R⁶⁰, and wherein Het, R^{N2}, R^c and R⁶⁰ are defined as in claim 1.

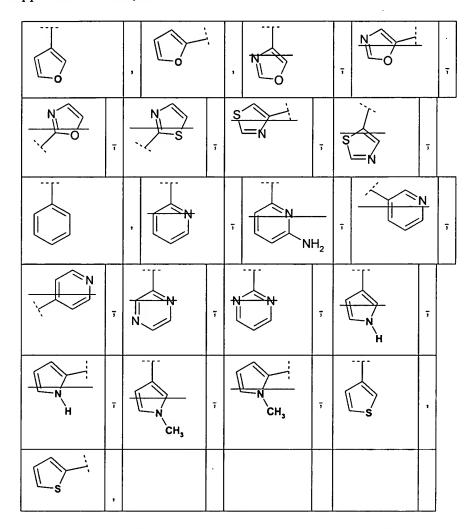
- 11. (Original) The compound according to claim 10, wherein **Z** is NH-SO₂-R^c, wherein **R**^c is selected from the group consisting of (C₁₋₆)alkyl, (C₃₋₆)cycloalkyl, (C₁₋₃)alkyl-(C₃₋₆)cycloalkyl, (C₂₋₆)alkenyl, phenyl, naphthyl, **Het**, (C₁₋₃)alkyl-phenyl, (C₁₋₃)alkyl-naphthyl, (C₁₋₃)alkyl-**Het**, wherein said alkyl, cycloalkyl, alkyl-cycloalkyl, alkenyl, phenyl, naphthyl, **Het**, alkyl-phenyl, alkyl-naphthyl, or alkyl-**Het**, are all optionally substituted with 1 to 4 substituents selected from **R**⁶⁰, wherein **R**⁶⁰ and **Het** are defined as in claim 10.
- (Currently amended) The compound according to claim 11, wherein Z is NH-SO₂-R^c, wherein

R^c is selected from the group consisting of methyl, ethyl, n-propyl, i-propyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, pyrrolidine, piperidine, morpholine, thiomorpholine, piperazine, phenyl, naphthyl, benzyl, thiophene and, furan, pyrrole, imidazole, pyrazole, oxazole, isoxazole, thiazole, pyridazine, pyrimidine, pyrazine, diazepine, azepine, quinoline, isoquinoline, benzofuran, benzothiophene, benzothiazole, purine, pteridine,

2,1,3- benzothiadiazole	N, S	, and	
lmidazo[2,1- B][1,3]thiazole	N S	Ť	

all of which are optionally substituted with 1 to 3 substituents selected from R^{60} , wherein R^{60} is defined as in claim 11.

13. (Currently amended) The compound according to claim 1, wherein R² is R²¹, wherein R²¹ is phenyl or **Het** selected from the group of formulas



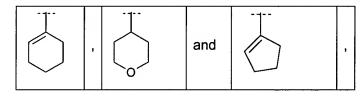
and wherein said R^{21} is unsubstituted or substituted with R^{150} , being defined as in claim 1.

- 14. (Currently amended) The compound according to claim 1, wherein R² is R²¹, wherein R²¹ is defined as in claim 1, and wherein R²¹ is optionally substituted with 1, 2 or 3 substituents selected from:
 - 1 to 3 substituents selected from halogen;
 - one of each substituent selected from: NO2, cyano, azido; and
 - 1 to 2 substituents selected from:
 - a) (C_{1-4}) alkyl or (C_{1-4}) alkoxy, both optionally substituted with OH, $O(C_{1-4})$ alkyl, $SO_2(C_{1-4})$ alkyl), 1 to 3 halogen atoms, amino, $NH(C_{1-4})$ alkyl) or $N((C_{1-4})$ alkyl)₂;
 - b) NR¹¹¹R¹¹² wherein both R¹¹¹ and R¹¹² are independently H, (C₁₋₄)alkyl, or R¹¹² is (C₃₋₇)cycloalkyl, (C₁₋₃)alkyl(C₃₋₇)cycloalkyl, phenyl, benzyl;-or both-R¹¹¹ and R¹¹²-are covalently bended together and to the nitrogen to which they are

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attached to form <u>5membered a O or S nitrogen containing heterocycle</u>, each of said alkyl, cycloalkyl, alkylcycloalkyl, phenyl and benzyl, being optionally substituted with halogen or:

- OR^{2h} or N(R^{2h})₂, wherein each R^{2h} is independently H<u>or</u>, (C₁₋₄)alkyl, or both R^{2h} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen containing heterocycle;
- c) NHCOR¹¹⁷ wherein R^{117} is (C_{1-4}) alkyl, $O(C_{1-4})$ alkyl or $O(C_{3-7})$ cycloalkyl; and
- e) $CONH_2$, $CONH(C_{1-4})$ alkyl), $CON((C_{1-4})$ alkyl)₂.
- 15. (Original) The compound according to claim 1, wherein \mathbb{R}^3 is selected from (C_{3-7}) cycloalkyl, (C_{5-7}) cycloalkenyl, (C_{6-10}) bicycloalkyl, (C_{6-10}) bicycloalkyl, or **Het**, wherein said groups are unsubstituted or mono- or disubstituted by halogen, cyano, nitro, hydroxy, (C_{1-4}) alkyl and/or O- (C_{1-4}) alkyl, wherein the alkyl groups may be fluorinated.
- **16**. (Original) The compound according to claim 15, wherein **R**³ is cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl or cycloheptyl, or a group selected from



wherein all said groups are unsubstituted or substituted by fluorine, (C₁₋₃)alkyl or CF₃.

- 17. (Original) The compound according to claim 16, wherein **R**³ is cyclopentyl or cyclohexyl.
- 18. (Original) The compound according to claim 1 wherein R^{4a}, R^{4b}, R⁵ each are independently H, hydroxy, halogen, cyano, nitro, carboxyl, (C₁₋₄)alkyl, CF₃, (C₁₋₄)alkoxy, -O-(C₃₋₇)cycloalkyl, -O-(C₁₋₃)alkyl-(C₃₋₇)cycloalkyl, -O-aryl, -O-(C₁₋₃)alkyl-aryl, -O-Het, -O-(C₁₋₃)alkyl-Het, NR^{N1}R^{N2}, COR^O, NR^{N2}COR^C, CONR^{N2}R^{N1}, or NR^{N3}CONR^{N1}R^{N2}; wherein Het, R^C, R^O, R^{N1}, R^{N2}, R^{N3} and R¹⁶⁰ are as defined in claim 1; and wherein all said alkyl groups, including alkoxy, may be mono-, di- or trisubstituted by fluorine or mono-substituted by chlorine or bromine.

- 19. (Original) The compound according to claim 18 wherein R^c , R^o and R^{N1} are independently of each other H, (C_{1-4}) alkyl, aryl, (C_{1-3}) alkyl-aryl; wherein aryl is defined as phenyl optionally substituted with R^{160} , wherein R^{160} is defined as in claim 18; and wherein all said alkyl groups may be mono-, di- or trisubstituted by fluorine or monosubstituted by chlorine or bromine; and wherein R^{N2} and R^{N3} are independently H or methyl.
- 20. (Original) The compound according to claim 18 wherein R⁴a, R⁴b, R⁵ each are independently H, hydroxy, halogen, cyano, nitro, methyl, CF₃, methoxy, carboxy, amino, -NMe₂, -CONH₂, -NHCONH₂, -CO-NHMe, -NHCONHMe, -CO-NMe₂ or -NHCONMe₂.
- 21. (Original) The compound according to claim 20 wherein R^{4a}, R^{4b}, R⁵ each are H, methyl or methoxy.
- 22. (Original) The compound according to claim 1 wherein R^{4a} is H or methyl.
- 23. (Original) The compound according to claim 1 wherein at least two of the substituents selected from R^{4a}, R^{4b}, R⁵ are H.
- 24. (Currently amended) The compound according to claim 1, wherein R⁶⁰ is each defined as 1 to 4 substituents independently selected from:
 - 1 to 3 substituents selected from halogen;
 - one of each substituent selected from: NO2, cyano, azido; and
 - 1 to 3 substituents selected from:
 - a) (C₁₋₄) alkyl, (C₃₋₇)cycloalkyl, (C₂₋₄)alkenyl, (C₂₋₄)alkynyl, (C₁₋₃)alkyl-(C₃₋₇)cycloalkyl, all of which optionally being substituted with \mathbb{R}^{150} ;
 - b) ORO;
 - e) N(R^{N2})R^{N1}:
 - f) N(R^{N2})COR^C:

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- j) COOR°;
- k) CON(RN2)RN1;
- I) phenyl, Het, (C₁₋₃alkyl)phenyl or (C₁₋₃alkyl)Het; wherein Het is selected from furan, tetrahydrofuran, thiophene, tetrahydrothiophene<u>and</u>, tetrahydropyran, pyridinyl, azetidine, pyrrolidine, piperidine, piperazine, morpholine, thiomorpholine, homopiperidine and homopiperazine, all of which optionally being substituted with R¹⁵⁰;

wherein said R^{N1}, R^C and/or R^O are optionally substituted with R¹⁵⁰ as defined, and R¹⁵⁰, R^{N1}, R^{N2}, R^C and R^O are defined as in claim 1.

25. (Original) The compound according to claim 1, wherein

R¹⁵⁰ is defined as 1 to 4 substituents independently selected from:

- 1 to 3 fluorine-substituents;
- one of each substituent selected from: chlorine, bromine, iodine, NO₂, cyano, azido; and
- 1 to 3 substituents selected from:
- a) (C₁₋₃) alkyl, CF₃, (C₃₋₆)cycloalkyl, (C₁₋₃) alkyl-(C₃₋₆)cycloalkyl, all of which optionally substituted with $\mathbf{R}^{\mathbf{160}}$;
- b) OR^o;
- e) $N(R^{N2})R^{N1}$;
- f) N(R^{N2})COR^C;
- i) COOR°;
- k) $CON(R^{N2})R^{N1}$;

wherein said R^{N1} , R^{C} and/or R^{O} are optionally substituted with R^{160} as defined; and R^{160} , R^{N1} , R^{N2} , R^{C} and R^{O} are defined as in claim 1.

26. (Original) The compound according to claim 1, wherein

R¹⁶⁰ is defined as 1, 2 or 3 substituents independently selected from:

- 1, 2 or 3 fluorine substituents; and
- one of each substituent selected from chlorine, bromine, iodine, CN, nitro, methyl, trifluoromethyl, ethyl, n-propyl, i-propyl, COOH, COOCH₃, OH, OCH₃, OCF₃, NH₂, NHCH₃, N(CH₃)₂, SO₂NH₂, SO₂NHCOCH₃, NHCOCH₃ or CONH₂, CONHCH₃ and CON(CH₃)₂.

- 27. (Currently amended) The compound according to claim 1, wherein
 - R^o, R^c are independently defined as (C₁₋₄)alkyl, (C₃₋₆)cycloalkyl, (C₁₋₃)alkyl-(C₃₋₆)cycloalkyl, phenyl, benzyl, **Het**, (C₁₋₃)alkyl-**Het**; all of which are optionally substituted as defined; and R^o may also be H;
 - R^{N1} is H, (C₁₋₄)alkyl, (C₃₋₆)cycloalkyl, (C₁₋₃)alkyl-(C₃₋₆)cycloalkyl, phenyl, benzyl, phenylethyl, **Het**, (C₁₋₃)alkyl-Het; wherein said alkyl, cycloalkyl, alkyl-cycloalkyl, phenyl, benzyl, phenylethyl, **Het** and alkyl-**Het** are optionally substituted as defined; or
 - R^{N2}, R^{N3}, R^{N4} are independently H, methyl, ethyl, n-propyl, i-propyl, cyclopropyl, cyclopropyl, cyclopropylmethyl; all of which being optionally substituted with fluorine, carboxy or methoxycarbonyl; and/or wherein said ethyl, n-propyl or i-propyl is optionally substituted with hydroxy, methyl, methoxy, amino, -NH(CH₃) and/or -N(CH₃)₂;-and

in the case

a) of a group N(R^{N2})R^{N1}-the substituents R^{N2} and R^{N1}-or
b) of a group NR^{N3}-N(R^{N2})R^{N1}-the substituents R^{N3}-and R^{N1}-or R^{N2}-and R^{N1}
may be covalently bonded together to form a 5 , 6 - or 7-membered saturated heterocycle which may have additionally one heteroatom selected from O, N, and S, wherein said heterocycle is optionally substituted as defined;

wherein Het is defined as in claim 1.

- 28. (Previously amended) A method of inhibiting HCV polymerase activity comprising contacting an HCV polymerase with a compound of the formula I according to claim 1, or a pharmaceutically acceptable salt thereof.
- 29. (Previously amended) A method of inhibiting the RNA dependent RNA polymerase activity of the enzyme NS5B, encoded by HCV, comprising contacting the enzyme NS5B, encoded by HCV, with a compound of the formula I according to claim 1, or a pharmaceutically acceptable salt thereof...

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- **30.** (Previously amended) A method of inhibiting the replication of the Hepatitis C virus comprising contacting the Hepatitis C virus with a compound of the formula I according to claim 1, or a pharmaceutically acceptable salt thereof.
- 31. (Original) A method of treating or preventing HCV infection in a mammal, comprising administering to the mammal an effective amount of a compound of formula I according to claim 1, or a pharmaceutically acceptable salt thereof.
- **32.** (Previously amended) A method of treating or preventing HCV infection in a mammal, comprising administering to the mammal an effective amount of a combination of a compound of formula I according to claim 1, or a pharmaceutically acceptable salt thereof, with another antiviral agent.
- 33. (Original) A pharmaceutical composition for the treatment or prevention of HCV infection, comprising an effective amount of a compound of formula I according to claim 1, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- **34.** (Previously amended) The composition according to claim 33 further comprising a therapeutically effective amount of one or more other antiviral agents.
- **35.** (Original) The composition according to claim 34, wherein said antiviral agent is selected from: ribavirin and amantadine.
- **36.** (Original) The composition according to claim 34 wherein the antiviral agent is an other anti-HCV agent.
- **37.** (Previously amended) The pharmaceutical composition according to claim 36, wherein the other anti-HCV agent is an immunomodulatory agent.
- **38.** (Previously amended) A composition according to claim 36, wherein the other anti-HCV agent is another inhibitor of HCV polymerase.

- **39.** (Original) The composition according to claim 36, wherein the other anti-HCV agent is an inhibitor of HCV NS3 protease.
- **40.** (Original) The composition according to claim 36, wherein the other anti-HCV agent is an inhibitor of another target in the HCV life cycle.
- 41. (Original) A composition according to claim 40, wherein said inhibitor of another target in the HCV life cycle is an agent that inhibits a target selected from HCV helicase, HCV NS2/3 protease and HCV IRES.
- 42. (Cancelled)
- **43.** (Currently amended) A compound of the following formula:

$$R^2$$
 R^3

wherein A, B, R^2 , R^3 and Z are as defined in the following table:

Cpd.#	Α	В	R²	R³	· Z
101	-N(CH₃)-	<u>-C</u>	NH ₂	7	N-S
114	-N(CH₃)-	=C-			N-S

Cpd.#	Α	В	R²	R³	Z
115	-N(CH ₃)-	=C-		5	N S
116	-N(CH₃)-	<u>-</u> ¢	N N	J	N S
117	- N(CH₃)-	=C-	N N	7	N-S
118	=C(CH ₃)-	-N-		5	N S
119	=C(CH₃)-	-N-		7	O O O N S CH ₃
123	- N(CH₃)-	= C -		7	N S CH ₃
124	-NH-	=C-		J	NH NH
125	-NH-	=C-		5	N-S-CH ₃
126	-N(CH₃)-	= C -			H N N N N N N N N N N N N N N N N N N N

Cpd.#	Α	В	R²	R³	Z
127	= C(CH₃)-	-N-	NH ₂		O O OMe N S OMe
129	-N(CH₃)-	=C-		7	O S H

44. (Previously added) A compound of the following formula:

wherein R^2 , R^3 , R^{4a} , p and Z are as defined in the following table, wherein p designates the C-atom on the benzene ring to which the group C(=O)-Z is bonded:

Cpd. #	R²	R³	R ^{4a}	р	Z
201		5	-OCH ₃	2	O O O O O O O O O O O O O O O O O O O
202		5	-OCH₃	2	O O O N S
203		Ţ	-H	3	O O O

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Cpd. #	R²	R³	R ^{4a}	р	Z
204			土	3	NH N